Space Weather Forecast

Issued on Friday, 08 April 2022 at 01:23 Local

This forecast provides a four day assessment of space weather events. The probabilities stated below are for reaching or exceeding the given levels. For more information about space weather impacts please see the Met Office Space Weather Scales https://www.metoffice.gov.uk/weather/learn-about/space-weather/uk-scales

Space Weather Forecast Headline: Chance of Minor Geomagnetic Storms, mainly day 3 (10th).

Analysis of Space Weather Activity over past 24 hours

Solar Activity: Solar activity has been Low over the past 24 hours, with one common class flare at 07/0133 UTC. There are currently four sunspot regions on the visible side of the Sun. The largest region remains in the southwest quadrant of the disc, however this has shown some signs of decay and produced no noteworthy activity. All other regions are small, weak and stable.

No Earth-directed coronal mass ejections (CMEs) have occurred in the last 24 hours, although there are a number of filaments (lines of material held together on the Sun by its magnetic field) visible on the Earth-facing disc that are being monitored for any potential eruptions.

Solar Wind / Geomagnetic Activity: The solar wind has been at slightly elevated levels, with speeds peaking at 466 km/s. The magnetic field carried by the wind was weak, with its north-south component also weak. Geomagnetic activity was Quiet to Active.

Energetic Particles / Solar Radiation: The count rate of energetic particles (high energy protons) was at background with no solar radiation storms occurring.

Four-Day Space Weather Forecast Summary

Solar Activity: Solar activity is forecast to be Low to Very Low, with relatively fewer and less complex active regions on the visible side of the sun than of late.

Solar Wind / Geomagnetic Activity: The currently slightly elevated solar winds are expected to ease to mainly background levels through today. Then little change expected until tomorrow (9th April), when there is a slight chance of a glancing interaction from a CME which left the Sun around 04/2200 UTC, although this is very low confidence. Weak coronal hole influence is also expected to arrive through the forecast period, most likely during day 3 (10th) and persisting day 4 (11th). Geomagnetic activity is forecast to be Quiet to Unsettled today and also day 4 (11th), increasing Unsettled to Active tomorrow and also day 3 (10th April), with a chance of G1/Minor Storms.

Energetic Particles / Solar Radiation: The count rate of energetic particles (high energy protons) is forecast to remain at background with no solar radiation storms occurring.

Issued by Met Office Space Weather Advisor, Tel: +44 (0) 330 135 4254 Email: moswoc@metoffice.gov.uk

© Crown Copyright 2022. All Rights Reserved.

Met Office Space Weather Forecast

Geomagnetic Storms:

Geo-Magnetic Storm Probability (Exceedance)	Level	Past 24 Hours (Yes/No)	Day 1 (00-24 UTC) (%)	Day 2 (00-24 UTC) (%)	Day 3 (00-24 UTC) (%)	Day 4 (00-24 UTC) (%)
Minor or Moderate	G1 to G2	No	10	20	40	20
Strong	G3	No	1	2	2	1
Severe	G4	No	1	1	1	1
Extreme	G5	No	1	1	1	1

Radio Blackouts - X Ray Flares:

X Ray Flares Probability	Level	Past 24 Hours (Yes/No)	Day 1 (00-24 UTC) (%)	Day 2 (00-24 UTC) (%)	Day 3 (00-24 UTC) (%)	Day 4 (00-24 UTC) (%)
Active	R1-R2 M Class	No	5	5	2	1
Very Active	R3 to R5 X	No	1	1	1	1

Solar Radiation Storms - (High Energy Protons):

Radiation Storms Probability (Exceedance)	Level (cm^{-2} sr^{-1} s^{-1})	Past 24 Hours (Yes/No)	Day 1 (00-24 UTC) (%)	Day 2 (00-24 UTC) (%)	Day 3 (00-24 UTC) (%)	Day 4 (00-24 UTC) (%)
Active	≥ S1	No	2	2	1	1
Very Active	≥ S3 *	No	1	1	1	1

* S3 ≥ 10 MeV ≥ 1000 pfu and / or ≥ 50 MeV ≥ 10 pfu. (pfu = $cm^{-2}sr^{-1}s^{-1}$)

Issued by Met Office Space Weather Advisor, Tel: +44 (0) 330 135 4254 Email: moswoc@metoffice.gov.uk

© Crown Copyright 2022. All Rights Reserved.